NORTH CAROLINA DIVISION OF **AIR QUALITY**

Application Review

Issue Date: TBD

Region: Winston-Salem Regional Office

County: Guilford

NC Facility ID: 4100822

Inspector's Name: Robert Barker **Date of Last Inspection:** 11/05/2019

Compliance Code: 3 / Compliance - inspection

Facility Data

Applicant (Facility's Name): Thomas Built Buses, Inc. - Courtesy Road Facility

Facility Address:

Thomas Built Buses, Inc. - Courtesy Road Facility

1408 Courtesy Road

High Point, NC 27260

SIC: 3713 / Truck And Bus Bodies

NAICS: 336211 / Motor Vehicle Body Manufacturing

Facility Classification: Before: Title V After: Title V Fee Classification: Before: Title V After: Title V

Permit Applicability (this application only)

SIP: 02D: .0503, .0515, .0516, .0521, .0524,

.1111, .1806

NSPS: Dc

NESHAP: 4M, 4P, 4Z, 5D

PSD: n/a

PSD Avoidance: n/a NC Toxics: n/a **112(r):** n/a Other: n/a

Contact Data

Facility Contact Technical Contact Authorized Contact Jacqueline Abou-Rizk Christopher Russell Jacqueline Abou-Rizk Environmental Manager **Director of Operations Environmental Manager** (336) 881-6025 (336) 889-4871 (336) 881-6025 1408 Courtesy Road 1408 Courtesy Road 1408 Courtesy Road High Point, NC 27260 High Point, NC 27260 High Point, NC 27260

Application Data

Application Number: 4100822.19B **Date Received:** 11/27/2019 **Application Type:** Renewal **Application Schedule:** TV-Renewal

Existing Permit Data Existing Permit Number: 03209/T21 Existing Permit Issue Date: 12/17/2019

Existing Permit Expiration Date: 08/31/2020

Total Actual emissions in TONS/YEAR:

CY	SO2	NOX	voc	co	PM10	Total HAP	Largest HAP
2018	0.0300	4.49	63.23	3.44	2.81	3.90	1.37 [Xylene (mixed isomers)]
2017	0.0300	3.66	64.87	2.89	1.22	4.21	1.27 [Xylene (mixed isomers)]
2016	0.0300	4.56	70.31	3.58	1.14	3.06	0.7873 [TCE (trichloroethylene)]
2015	0.0300	6.14	57.69	4.42	1.30	14.14	10.64 [Polycyclic Organic Matter (Spe]
2014	0.0300	4.78	57.15	3.71	1.36	3.86	1.36 [Xylene (mixed isomers)]

Review Engineer: Russell Braswell **Comments / Recommendations:**

Issue 03209/T22 **Review Engineer's Signature:** Permit Issue Date: TBD Date:

Permit Expiration Date: TBD+5 years

1. Purpose of Application:

Thomas Built Buses, Inc. - Courtesy Road Facility ("TBB", "the facility") currently operates a factory in Guilford County under Title V permit 03209T21 ("the existing permit"). The existing permit is set to expire on August 31, 2020. TBB submitted this permit application in order to renew the existing permit. In addition, TBB requested minor corrections and changes to the existing permit.

Because the application for permit renewal was received at least six¹ months before the expiration date, the existing permit will remain in effect, regardless of expiration date, until this application approved or denied.

2. Facility Description:

According to the most recent inspection report, this facility assembles buses from unfinished chassis. Operations at this facility include welding, painting, powder coating, gluing, and sheet metal forming.

3. Application Chronology:

- November 27, 2019 Application received in regional office.
- December 10, 2019 Application received in central office.
- December 17, 2019 Permit T21 (minor modification) issued.
- January 16, 2020 Email sent to applicant regarding the potential removal of boiler ES-CONT400. Aimee Andrews² responded by email stating that this boiler should remain on the permit.
- January 17, 2020
 An initial draft of the permit and application review were sent to DAQ staff (Tom Anderson, Mark Cuilla, Samir Parekh, Robert Barker, Davis Murphy, Lisa Edwards) and TBB staff (Aimee Andrews). See Attachment 2 for a summary of comments received on this initial draft.
- February 3, 2020 Email sent to Aimee Andrews requesting a corrected Form A to show the name of the facility. The corrected form was received February 13, 2020.
- XXX Public notice.
- XXX Permit issued.

4. Title V Permit Modifications Following the Previous Permit Renewal:

August 21, 2015 Permit T20 issued. This action renewed the Title V permit. In addition, this
action removed Toxic Air Pollutant emission limits from the permit as allowed
by Session Law 2012-91.

¹ The six-month deadline is given in General Condition K of the existing permit and in 15A NCAC 02Q .0513(b). During the time that TBB was preparing this permit application, the deadline in General Condition K was nine months.

² Consultant for Trinity Consultants, a firm representing TBB for this application.

December 17, 2019 Permit T21 issued. This action was a minor modification that added a new
powder coating line and associated control device. In addition, it made minor
corrections to the existing permit, removed references to 02D .0958, and
removed references to the Case-by-Case MACT for boilers.

5. Changes to the Title V Permit:

In the renewal application, TBB requested the following changes:

- o Replace an existing powder coating operation (ES-PP02) with a new one (ES-PP03);
- o Remove references to 02D .0958 from the permit because this rule no longer applies; and
- o Correct work practice and reporting requirements associated with MACT Subpart DDDDD.

The above changes were made during the T21 permit revision. No further action regarding these requests is required.

In addition to the above, TBB requested the following changes to the list of insignificant activities:

- o Add IES-25 (natural gas-fired air makeup units);
- o Add IES-Maint (maintenance activities at the facility); and
- o Remove IES-23 because it is no longer at the facility;

The above changes have all been implemented in the new permit.

For a summary of all changes made in the new permit, see Attachment 1.

6. Regulatory Overview and Rules Review:

Under the existing permit, TBB is subject to the following State Implementation Plan ("SIP") rules:

- 15A NCAC 02D .0503 "Particulates from Fuel Burning Indirect Heat Exchangers"
- 15A NCAC 02D .0515 "Particulates from Miscellaneous Industrial Processes"
- 15A NCAC 02D .0516 "Sulfur Dioxide from Combustion Sources"
- 15A NCAC 02D .0521 "Control of Visible Emissions"
- 15A NCAC 02D .0524 "New Source Performance Standards" (40 CFR Part 60, Subpart Dc)
- 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (40 CFR Part 63, Subparts MMMM, PPPP, ZZZZ, and DDDDD)
- 15A NCAC 02D .1806 "Control and Prohibition of Odorous Emissions" [State enforceable only]

TBB's requirements under each rule that applies to this facility are discussed below.

a. <u>02D .0503 "Particulates from Fuel Burning Indirect Heat Exchangers"</u>

This rule applies to all indirect heat exchangers (e.g. boilers). Each boiler at this facility is subject to the rule. None of the ovens at this facility are indirect heat exchangers and therefore are not subject to this rule.

This rule limits particulate emission on a heat input basis. For each individual boiler, the limit is based on the maximum heat input for all boilers at the facility at the time the individual boiler was installed.

Therefore, the emission limit for ES-CB600 and ES-CONT400 (0.4 lb/MMBtu) is higher than the emission limit for ES-1 (0.34 lb/MMBtu).

The only fuel burned in boilers at this facility is natural gas. Based on the emission factors published in US EPA's publication AP-42, natural gas is expected to comply with both of the above emission limits by default. Therefore, the permit does not require any monitoring, recordkeeping, or reporting to comply with this rule. TBB is expected to continue to comply with this rule.

b. <u>02D .0515 "Particulates from Miscellaneous Industrial Processes"</u>

In general, this rule limits particulate emissions from sources with no other specific particulate emission limits. The limit for any individual source is based on the process rate of the source. This rule applies to both bus production lines and the powder coating operation.

In order to demonstrate compliance with this rule for the bus production lines, the facility keeps records of process rates such that the actual emissions can be compared to the calculated emission limit. In order to demonstrate compliance with this rule for the powder coating operation, the facility operates and maintains a bagfilter. The facility must perform regular maintenance on the bagfilter, and submit a summary report regarding the bagfilter twice per year.

Based on the most recent inspection report, TBB appears to be in compliance with the rule. Continued compliance will be determined with subsequent inspections and reports.

c. 02D .0516 "Sulfur Dioxide Emissions from Combustion Sources"

This rule limits sulfur dioxide ("SO₂") from fuel burning sources with no other specific SO₂ emission limits. This rule applies to each fuel burning source at this facility.

The only fuels burned at this facility are natural gas and diesel. According to the emission factors published in US EPA's publication AP-42, these fuels will comply with 02D .0516 by default. Therefore, the permit does not require any monitoring, recordkeeping, or reporting to comply with this rule. TBB is expected to continue to comply with this rule.

d. 02D .0521 "Control of Visible Emissions"

This rule limits visible emissions ("VE") from emission sources with no other specific VE emission limit. The emission limit is either 20% or 40%, depending on the construction date of the specific emission source.

In general, TBB demonstrates compliance with this rule by performing monthly observations of each emission source for VE above normal. The facility must keep records of the observations and report them twice per year.

Based on the most recent inspection report, TBB appears to be in compliance with this rule. Continued compliance with this rule will be determined with subsequent inspections and reports.

e. 02D .0524 "New Source Performance Standards" ("NSPS": 40 CFR Part 60)

This rule incorporates the NSPS rules into North Carolina's SIP. The only NSPS rule that applies to this facility is Subpart Dc "Small Industrial-Commercial-Institutional Steam Generating Units".

Subpart Dc applies to all boilers constructed after 1989 with a heat input greater than 10 million Btu per hour. The only such boiler at this facility is ES-1.

For natural gas-fired boilers with a heat input less than 30 million Btu per hour, the only requirement under this rule is to keep monthly records of fuel use. No reporting is required.

Based on the most recent inspection report, TBB appears to be in compliance with this rule. Continued compliance with this rule will be determined with subsequent inspections.

f. 02D .1111 "Maximum Achievable Control Technology" ("MACT"; 40 CFR Part 63)

This rule incorporates the MACT rules into North Carolina's SIP. There are several MACTs that apply to this facility.

For the purposes of MACT applicability, this facility is considered a major source of hazardous air pollutants ("HAPs"). Rules that apply to only area sources of HAPs do not apply to this facility by default.

1. Subpart MMMM "Surface Coating of Miscellaneous Metal Parts and Products"

This rule applies to facilities that apply coatings to metal parts and are major sources of HAPs. Each of the coating lines at this facility is subject to this rule. This facility is considered "existing" under this rule.

In general, this rule limits emissions of HAP from coating processes based on the amount and nature of coating applied. The facility demonstrates compliance with the emission limit by using the calculation methods in Subpart PPPP. The facility keeps records of material usage and emission calculations and submits reports twice per year.

Based on the most recent inspection report, TBB appears to be in compliance with this rule. Continued compliance with this rule will be determined with subsequent inspections and reports.

2. Subpart PPPP "Surface Coating of Plastic Parts and Products"

This rule applies to facilities that apply coatings to plastic parts and are major sources of HAPs. Each of the coating lines at this facility is subject to this rule. This facility is considered "existing" under this rule.

In general, this rule limits emissions of HAP from coating processes based on the amount and nature of coating applied. In order to demonstrate compliance with this rule, the facility keeps track of materials used and then calculates HAP emissions via the "emission rate with add-on controls option" or examines each coating material using the "compliant material option". The rule gives specific formulas and calculation methods for each option.

The facility is required to keep records of all material usage and compliance calculations and submit reports twice per year.

Based on the most recent inspection report, TBB appears to be in compliance with this rule. Continued compliance with this rule will be determined with subsequent inspections and reports.

3. Subpart ZZZZ "Stationary Reciprocating Internal Combustion Engines"

This rule applies to all stationary reciprocating internal combustion engines ("RICE"). The only stationary RICE at this facility is ES-D21.

The requirements of Subpart ZZZZ depend on the type of engine in question. For the purposes of this rule, ES-D21 is considered an emergency-use, compression ignition engine, with a site rating of more than 500 horsepower, located at a major source of HAP. Per 40 CFR 63.6590(b)(3)(iv), such sources are subject to this rule, but do not have to meet the requirements of this rule.

The existing permit indicates that the portable generator IES-23 is subject to Subpart ZZZZ. In the definitions to Subpart ZZZZ, the rule states that "Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30...". IES-23 does not meet this definition, and therefore is exempt from this rule.

4. Subpart DDDDD "Industrial, Commercial, and Institutional Boilers and Process Heaters"

This rule applies to all boilers and process heaters located at a major source of HAP. Note that "process heater" only includes indirect heat transfer. Each boiler at this facility is subject to this rule. None of the ovens are subject to this rule.

The requirements of Subpart DDDDD depend on the type of boiler in question. For the purposes of this rule, each boiler at this facility is considered an existing source designed to burn gas-1 fuels. In general, such sources are required to undergo a one-time energy assessment, an initial tune-up, and an annual tune-up thereafter. The facility must keep records of tunes-ups and maintenance and submit reports twice per year.

Based on the most recent inspection report, TBB has performed the required energy assessment and initial tune-up. TBB appeared to be in compliance with this rule at the time of the most recent inspection. Continued compliance will be determined with subsequent inspections and reports.

The specific condition for this rule will be updated to remove references to past dates and requirements that no longer apply.

g. 02D .1806 "Control and Prohibition of Odorous Emissions" [State enforceable only]

This rule requires that the facility not operate the facility in such a way that contributes to odor complaints outside of the facility's boundary.

This rule has no specific compliance requirements. Based on the most recent inspection report, TBB appears to be in compliance with this rule. Continued compliance will be determined during subsequent inspections.

h. Nonapplicable Rules:

There are several SIP and Federal rules that could potentially apply at this renewal, but ultimately do not.

1. 02D .0530 "Prevention of Significant Deterioration" ("PSD"; 40 CFR Parts 51 and 70)

This facility is considered a minor source for the purposes of PSD applicability. Therefore, this rule does not apply to this facility.

In addition, this facility has not accepted any Federally-enforceable limits in order to avoid PSD applicability.

2. 02D .0614 "Compliance Assurance Monitoring" ("CAM"; 40 CFR Part 64)

This rule incorporates the requirements of 40 CFR Part 64 (a.k.a. "CAM") into North Carolina's SIP. CAM applies to individual emission sources based on the following criteria:

- The source is equipped with a control device,
- The source being controlled is subject to a non-exempt emission standard (defined by 02D .0614(b)(1)),
- The control device is being used to comply with the emission standard, and
- The source being controlled has potential emissions of the pollutant subject to the emission standard greater than major source thresholds.

This facility only operates one emission source with a control device (ID No. ES-PP03). This emission source does not have potential emissions greater than any major source threshold³, and therefore is exempt from CAM.

3. <u>02D .0900 "Volatile Organic Compounds" and 02D .1400 "Nitrogen Oxides" (a.k.a. "Reasonably Available Control Technology"; "RACT")</u>

In general, RACT rules apply to areas currently considered as nonattainment for ozone (see 02D .0902(f) and 02D .1402(d)). Guilford County is not such an area. Therefore, no RACT rules apply to this facility.

4. <u>02D .1100 "Control of Toxic Air Pollutants" and 02Q .0711 "Emission Rates Requiring a Permit"</u> [both state enforceable only]

Emission limits associated with 02D .1100 and 02Q .0711 have previously been removed from this permit as allowed by Session Law $2012-91^4$. Therefore, the permit does not contain any reference to these rules.

This permit renewal does not trigger a new review for emissions of toxic air pollutants.

5. 02D .2100 "Risk Management Program" (a.k.a. "Section 112(r) of the Clean Air Act")

This facility does not appear to store any material listed in 40 CFR 68.130 above its respective threshold. Therefore, this rule does not apply to this facility. In addition, this facility does not have any increased requirements under Section 112(r) of the Clean Air Act.

6. <u>40 CFR Part 60, Subpart IIII "Stationary Compression Ignition Internal Combustion Engines", and Subpart JJJJ "Stationary Spark Ignition Internal Combustion Engines"</u>

These rules apply to stationary reciprocating engines constructed after April 2006 (for compression ignition engines) or July 2008 (for spark ignition engines). None of the stationary engines at this facility were constructed after these dates. Therefore, these rules do not apply to this facility.

³ See application review for Title V permit 03209T21, issued December 17, 2019.

⁴ See application review for Title V permit 03209T20, issued August 21, 2015.

7. 40 CFR Part 63, Subpart IIII "Surface Coating of Automobiles and Light-Duty Trucks"

This rule applies to facilities that apply coatings to automobiles and light-duty trucks. In the rule's definitions, an automobile has fewer than eight passengers and light-duty trucks are meant to transport property. This facility manufactures passenger busses, which do not meet either of these definitions. Therefore, this rule does not apply to this facility.

7. Emissions Review

As part of this renewal, TBB requested that the portable generator IES-24 be removed from the permit. In addition, TBB requested that the list of insignificant activities include the air handling units and facility-wide maintenance activities. The potential emissions for the heaters and engine are calculated in Table 6-1. The overall change in potential emissions from this facility are calculated in Table 6-2.

Note that the gas-fired heaters included in IES-25 are not new sources. They are now being included in the list of insignificant activities after TBB concluded they did not meet the definition of "human comfort" in 15A NCAC 02Q .0503(7)(d).

Table 6-1: Potential Emission Calculations

Natural gas-fired heaters (IES-25)				
	Emission	Potential		
Pollutant	Factor**	Emissions		
	(lb/MMscf)	(ton/yr)		
SO_2	0.6	0.16		
NOx	100	26.51		
VOC	5.5	1.46		
CO	84	22.27		
PM*	7.6	2.01		
Total HAP	1.89	0.50		

Constants				
Natural gas HHV	1,020 Btu/scf			
Total heat input	61.74 MMBtu/hr			
(across 11 heaters)	01.74 WIWIDtu/III			
Engine power	38 hp			
Conversions	8,760 hr/yr			
Conversions	2,000 lb/ton			

Gasoline-fired portable engine (IES-23)				
	Emission	Potential		
Pollutant	Factor***	Emissions		
	(lb/hp-hr)	(ton/yr)		
SO_2	5.91E-04	0.10		
NOx	0.011	1.83		
VOC	0.022	3.59		
CO	6.96E-03	1.16		
PM*	7.21E-04	0.12		
Total HAP	4.85E-04	0.08		

Notes
* 100% of PM is PM10 and PM2.5
** Factors from AP-42 Chapter 1.4
*** Factors from AP-42 Chapter 3.3

Table 6-2: Change in Facility-Wide Potential Emissions

Change in Potential Emissions					
D 11	Heaters	Generator	Maintenance*	Total	
Pollutant	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(lb/hr)
SO_2	0.16	(0.10)		0.06	0.01
NOx	26.51	(1.83)		24.68	
VOC	1.46	(3.59)	1.35	(0.78)	
CO	22.27	(1.16)		21.11	
PM**	2.01	(0.12)		1.89	0.43
Total HAP	0.50	(0.08)	1.47	1.89	
Notes					
* Calculations for emissions from this source taken from application					

8. Other Regulatory Concerns

• This facility was most recently inspected by Robert Barker on November 5, 2019. TBB appeared to be in compliance with the existing permit at the time of that inspection.

** 100% of PM is PM10 and PM2.5

- TBB was issued a Notice of Violation on March 8, 2018 for a late report submittal. No other violations have been reported since the previous permit renewal.
- No application fee, zoning consistency determination, or Professional Engineer's seal was required for this application.

9. Public Notice and EPA Review

A notice of the DRAFT Title V Permit shall be made pursuant to 15A NCAC 02Q .0521. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Consistent with 15A NCAC 02Q .0525, the EPA will have a concurrent 45-day review period. Copies of the public notice shall be sent to persons on the Title V mailing list and EPA. Pursuant to 15A NCAC 02Q .0522, a copy of each permit application, each proposed permit and each final permit shall be provided to EPA. Also, pursuant to 02Q .0522, a notice of the DRAFT Title V Permit shall be provided to each affected State at or before the time notice is provided to the public under 02Q .0521 above. Virginia is an affected State, and Forsyth County is an affected local program.

The Public Notice and EPA Review periods began on XXX

10. Recommendations

Issue permit 03209T22.

Attachment 1 to Review of application 4100822.19B Thomas Built Buses, Inc. - Courtesy Road Facility

Summary of Changes to Existing Permit

Page No.	Section	Description of Changes	
Throughout	Throughout	 Updated dates and permit numbers. Removed references to minor modifications. Fixed typos and formatting. 	
n/a	Insignificant Activities	 Removed references to MACT Subpart ZZZZ. Removed generator IES-24 at Permittee's request. Added IES-25 and IES-Maintenance at Permittee's request. 	
3	Permitted Emission Sources	Corrected description of ES-PP03 at Permittee's request (previously description included two paint booths, but only one is present.)	
11	2.1 B.5	Removed references to past dates and completed requirements.	
16	2.2 A.2	 Removed references to past dates and completed requirements. Simplified this condition by removing repetitive paragraphs. Ultimately, this change is only for clarity and will not change the Permittee's compliance requirements. 	
17	2.2 A.3	Removed references to past dates and completed requirements.	

Attachment 2 to Review of application 4100822.19B Thomas Built Buses, Inc. - Courtesy Road Facility

Summary of Comments on Initial Draft of Permit 03209T22

- Robert Barker, by email on January 22, 2020
- 1. The email pointed out typos in the draft permit.

Response: These issues have been corrected.

2. The facility's name on the draft permit has been changed from "Thomas Built Buses – Courtesy Road" to "Thomas Built Buses – DTNA". The facility does not want the name changed.

Response: This is the facility name as it appears on the Form A included in the application. TBB will have to submit a corrected Form A. The corrected form was received February 13, 2020.

- Mark Cuilla, by email on January 30, 2020
- 1. The email pointed out typos in the draft permit and application review.

Response: These issues have been corrected.

2. The permit requires that TBB demonstrate compliance with MACT Subpart PPPP by complying with Subpart MMMM. This requirement appears in Sections 2.2 A.3.c, d, e, and f. Why is this repeated four times?

Response: This repetition is not necessary. Paragraphs d, e, and f have been removed.

3. The application review discusses several nonapplicable rules (e.g. MACT Subpart IIII). Should these also be included in a permit shield?

Response: After discussion, we decided that a permit shield for these rules is not necessary at this time

- Aimee Andrews, by email on January 31 and February 3, 2020
- 1. The email pointed out typos in the draft permit and application review.

Response: These issues have been corrected.

2. The facility's name on the draft permit has been changed from "Thomas Built Buses – Courtesy Road" to "Thomas Built Buses – DTNA". The facility does not want the name changed.

Response: This is the facility name as it appears on the Form A included in the application. TBB will have to submit a corrected Form A. The corrected form was received February 13, 2020.

3. The boiler MACT condition should not require reporting operating time because it is not a limited-use boiler.

Response: This requirement has been removed.